

WHAT IS CLAIMED IS:

1. An arrangement for producing stack bundles from signatures, comprising:

a horizontally extending stack deposit support;

a conveyor to continuously supply a scaled flow of the signatures to the horizontally extending stack deposit support for formation of a signature stack;

a multi-part supporting device comprising first, second and third support elements, the supporting device being arranged to form a stack bundle by engaging the stack from below, the stack bundle having a front end and a back end with respect to a direction of a movement of the stack bundle through the arrangement;

the first and second support elements being arranged to act on the front end and the back end of the stack bundle, respectively, and arranged to be raised from below the stack deposit support to above the stack deposit support;

the third support element arranged to be raised and act on the front end of the stack bundle;

a compressing machine, the supporting device being arranged to transfer the stack bundle to the compressing machine by moving the stack bundle from a waiting position to a transfer position along the stack deposit support; and

a bundle strapping machine, the compressing machine being arranged to transfer the stack bundle to the bundle strapping machine.

2. The arrangement according to claim 1, wherein the third support element is arranged to move independently of the first and second support elements along the stack deposit support.

3. The arrangement according to claim 1, further comprising a separating device assigned to the first and the second support elements for forming a separating gap between the signatures supplied in the scaled flow, wherein the first and the second support elements can be raised jointly into the separating gap.

4. The arrangement according to claim 1, wherein the compressing machine includes:

first and second spaced apart compressing components to act on the front and back ends, respectively, of the stack bundle, the compressing machine being arranged to transport the stack bundle held between the first and second compressing components to the strapping machine, the strapping machine adjoining the stack deposit support and strapping the stack bundle with at least one band extending in the direction of the movement of the stack bundle through the arrangement.

5. The arrangement according to claim 1, further comprising a guide extending parallel to the stack deposit support, the first, second and third support elements of the supporting device being arranged to adjustably move on the guide.

6. The arrangement according to claim 4, further comprising an end-plate feeding mechanism, the end-plate feeding mechanism being arranged along the stack deposit support to supply end plates to reinforce the stack bundle at the front and back ends, respectively, the end-plate feeding mechanism being arranged to supply the back end plate at a gap between the second support element acting on the back end of the stack bundle at the transfer position and the second compressing component.

7. The arrangement according to claim 1, further comprising a gap formed between the second and third support elements along the stack deposit support, the second and third support elements transporting a front end plate for acting on the front end of the stack bundle held inside the gap in a direction opposite of the direction of the movement of the stack bundle through the arrangement.

8. The arrangement according to claim 6, wherein the end-plate feeding mechanism is arranged along the stack deposit support at a location between the compressing components of the compressing machine when the stack bundle is in the transfer position.

9. The arrangement according to claim 5, further comprising rails arranged above and parallel to the stack deposit support, the compressing machine being arranged to move along the rails.

10. A method of producing stack bundles from vertically aligned signatures in a row, utilizing the arrangement according to claim 1.

11. A method of producing stack bundles from continuously supplied signatures, utilizing the arrangement according to claim 1.

12. The arrangement according to claim 1, wherein the second and third support elements of the supporting device are arranged to act on the back end and the front end of the stack bundle, respectively, for moving the stack bundle to the transfer position.

13. The arrangement according to claim 12, further comprising a guide extending parallel to the stack deposit support, the second and third support elements of the supporting device being arranged to move along the guide.

14. The arrangement according to claim 12, further comprising an end-plate feeding mechanism, the end-plate feeding mechanism being arranged to supply a back end plate at a gap between the second support element and a compressing component of the compressing machine.